



LEVATOR GLANDULAE THYROIDEAE, A FIBROMUSCULOGLANDULAR BAND WITH PYRAMIDAL LOBE: A CASE REPORT

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ABSTRACT

Thyroid gland is an endocrine gland, situated in the lower part of the front and sides of the neck. Among other endocrine glands, it is well known for its developmental anomalies. Levator glandulae thyroideae is a fibromuscular band which connects the isthmus of thyroid gland with the hyoid bone. During a routine dissection in the department of anatomy of SRM medical college, levator glandulae thyroideae was seen with the pyramidal lobe on the left side in a 55year old male cadaver. The knowledge on anatomical variations of the thyroid gland may help the surgeons to plan a safe thyroid surgery.

INTRODUCTION:

The thyroid gland is an endocrine gland situated in the lower half of the front of the neck. It consists of two lateral lobes (right and left) connected by an isthmus. In few cases, an additional lobe is present, which is known as the pyramidal lobe. It forms a long pyramid which is attached by its base to the superior border of the isthmus, usually at its junction with the left lobe. Its apex is attached to the body of the hyoid bone by a fibrous band, which sometimes contains muscular fibers which are known as the Levator glandulae thyroideae. The organogenesis of the thyroid gland is often disturbed, leading to a variety of morphological variations of the gland (Hollinshead 1985). In the present case an anomaly of thyroid gland, the levator glandulae thyroideae with pyramidal lobe on the left side of the neck from the left lobe of the thyroid gland was observed. The knowledge of the levator glandulae thyroideae is very important during neck surgeries, for preventing iatrogenic injuries.

OBSERVATION:

In a routine dissection class in the Department of Anatomy of SRM medical college, levator glandulae thyroideae was observed in 55 years old male cadaver. The levator glandulae thyroideae was observed on the left of midline of the neck. It was muscular throughout its length. Initially the dissection of neck was carried out by reflecting the skin, superficial fascia with platysma and investing layer of deep cervical fascia, the isthmus of thyroid gland was identified. The isthmus was found to be lying on the 2-4 tracheal rings and along its upper border left side a glandular tissue was observed. To get a clear view of the gland, the sternohyoid and sternothyroid muscle was reflected above to its proximal attachment to hyoid bone and thyroid cartilage respectively. These muscles were reflected on both right and left side which exposed the pyramidal lobe on the left side. The pyramidal lobe was found partly on the left upper border of isthmus and from the left lobe of the thyroid gland. From the apex of the pyramidal lobe attachment of levator glandulae thyroideae was noted. The attachment of the levator glandulae thyroideae was carefully dissected. The connective tissue septum was found separating it from overlying sternohyoid and superior belly of omohyoid muscles. The levator glandulae thyroideae extended from the apex of the pyramidal lobe to the inferior border of the hyoid bone on the left side was observed.

DISCUSSION:

Anatomical variation in the thyroid gland may have the potential to cause injuries during thyroid surgical procedures. In the present study levator glandulae thyroideae (LGT) originated from pyramidal lobe attached to the left upper border of isthmus and partly to the left lobe of the thyroid gland. According to Gray's Anatomy, LGT extends from pyramidal lobe or upper border of the isthmus usually on the left side, to the body of hyoid bone above (Standring, 2006). Joshi et al., (2010) found the LGT in 30% of cases. Harjeet et al., (2004) reported the presence of LGT in 22.9% cases in males and 10.6% cases in females. Enayetullah et al., (2005) found LGT in 32% cases and its association with pyramidal lobe in 22% cases. Sreekanth Tallapaneni et al., observed that the LGT was arising from the upper part of anterior border of the thyroid cartilage and got inserted into the substance of the right lobe along the lower 2/3rd of its anterior border with the agenesis of the isthmus. The understanding of the thyroid anatomy and its association anatomical variation are very much essential, so that these anomalies are not overlooked in the differential diagnosis.

CONCLUSION:

The presence of LGT and its anatomical variations is important for surgeons while performing thyroidectomy. This study reports one of such variation which may be used as a reference for surgeons.

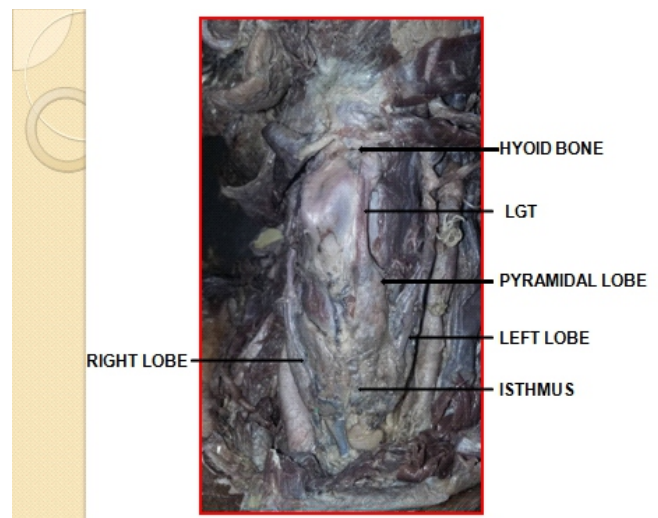


Fig 1: Thyroid gland showing Levator glandulae thyroideae (LGT) with pyramidal lobe.

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